Title: Apparatus For Spindle Bearing Friction Estimation For Reliable Disk Drive Startup

Docket No.: PANA-01066US2 Inventor: Brian Tanner
Serial No.: Unassigned Attorney: Thomas A. Ward

Serial No.: Unassigned Phone: (415) 362-3800 Express Mail No.: EV 326481563 US Filed: Herewith

Sheet 1 of 2

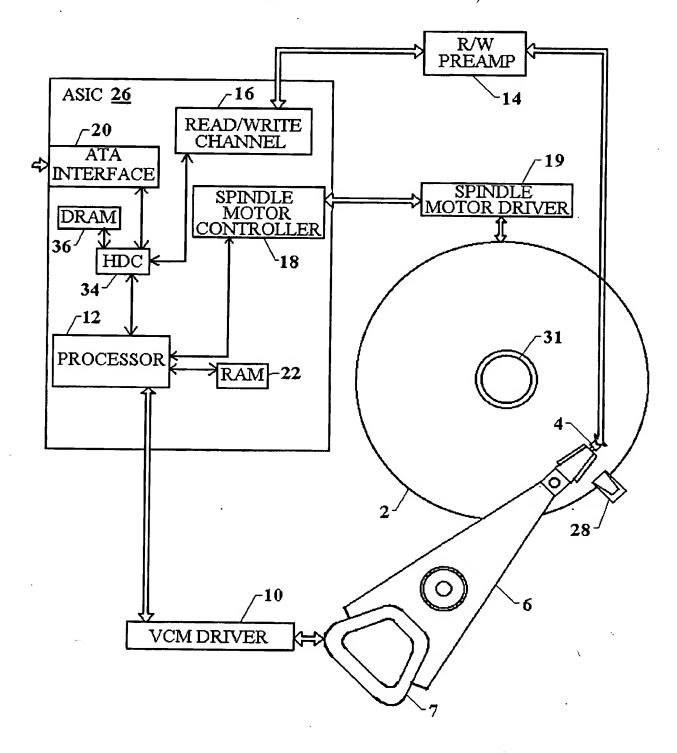


FIG. 1

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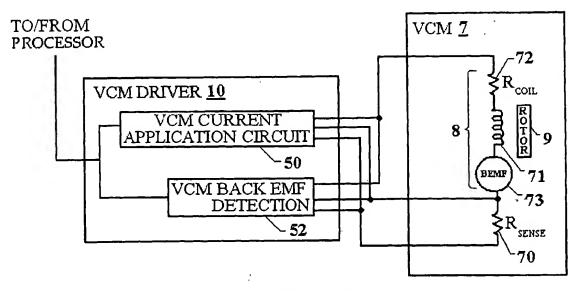


FIG. 2

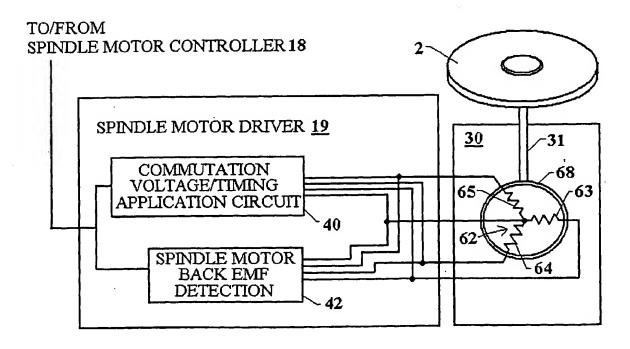


FIG. 3